

#### ICF international / Laboratory Data Consultants

Environmental Services Assistance Team, Region 9 1337 South 46th Street, Building 201, Richmond, CA 94804-4698 Phone: (510) 412-2300; Fax: (510) 412-2304.

## **MEMORANDUM**

TO:

Chris Lichens, Remedial Project Manager

Site Cleanup Section 4, SFD-7-4

THROUGH:

Rose Fong, ESAT Task Order Manager (TOM)

Quality Assurance (QA) Program, MTS-3

FROM:

Doug Lindelof, Data Review Task Manager

Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041

Technical Direction Form No.: 00105077 Amendment 3

DATE:

September 14, 2007

SUBJECT:

Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:

Omega Chem OU2

Site Account No.:

09 BC LA02

CERCLIS ID NO.:

CAD042245001

Case No.:

36520

SDG No.:

Y3CN1

Laboratory:

Shealy Environmental Services, Inc. (SHEALY)

Analysis:

1,4-Dioxane, 1,2-Dibromoethane, and 1,2-Dibromo-3-

eF

chloropropane (Trace SIM Volatiles)

Samples:

20 Ground Water Samples (see Case Summary)

Collection Date:

July 18, 19, 20, and 23, 2007

Reviewer:

Santiago Lee, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

#### Attachment

cc:

Carol Beard, CLP PO USEPA Region 8

Steve Remaley, CLP PO USEPA Region 9

CLP PO: [X] Attention

[X] Action

SAMPLING ISSUES: [X] Yes

[ ] No

00105077-8326/36520/Y3CN1-VS

## Data Validation Report

Case No.: 36520 SDG No.: Y3CN1

Site: Omega Chem OU2

Laboratory: Shealy Environmental Services, Inc.

Reviewer: Santiago Lee, ESAT/LDC

Date:

September 14, 2007

#### I. CASE SUMMARY

## Sample Information

Samples: Y3CN1 through Y3CN9 and Y3CP0 through Y3CQ0

Concentration and Matrix: Low/Medium Concentration Water

Analysis: 1,4-Dioxane, 1,2-Dibromoethane, and 1,2-Dibromo-3-

chloropropane by Trace Volatiles Selective Ion

Monitoring (SIM)

SOW: SOM01.1 and Modification Reference No. 1363.2

Collection Date: July 18, 19, 20, and 23, 2007 Sample Receipt Date: July 19, 20, 21, and 24, 2007

Extraction Date: Not Applicable

Analysis Date: July 25, 26, and 31, 2007

Field QC

Field Blanks (FB): Y3CN5, Y3CP1, Y3CP6, and Y3CO2 (in SDG

Y3CQ1)

Equipment Blanks (EB): Not Provided

Trip Blank (TB): Not Provided Background Samples (BG): Not Provided

Field Duplicates (D1): Y3CP9 and Y3CQ0

Laboratory OC

Method Blanks & Associated Samples:

VBLK25: Y3CN1 through Y2CN9, Y3CP0, and Y3CP1

VBLK26: Y3CN4RE, Y3CP2 through Y3CQ0 and storage blank

VHBLK32

VBLK31: storage blank VHBLK32RE

Tables

1A: Analytical Results with Qualifications

1B: Data Qualifier Definitions for Organic Data Review

2: Calibration Summary

#### CLP PO Action

- 1. Nondetected results for 1,4-dioxane in samples Y3CN5, Y3CN6, Y3CP0 through Y3CP4, and Y3CP6 through Y3CP9 are qualified as rejected (R) due to very low relative response factors (RRF <0.01) in initial and continuing calibrations (see Comment A).
- 2. The nondetected result for 1,4-dioxane in sample Y3CP8 is qualified as rejected (R) due to a very low deuterated monitoring compound (DMC) recovery (<20%; see Comment B).

#### **CLP PO Attention**

- 1. Detected results for 1,4-dioxane in samples Y3CN1 through Y3CN4, Y3CN7 through Y3CN9, Y3CP5, and Y3CQ0 are qualified as estimated (J) due to very low RRFs (<0.01) in initial and continuing calibrations (see Comment D).
- 2. Detected results for 1,4-dioxane in samples Y3CN1, Y3CN5, Y3CN6, Y3CP0, Y3CP5, Y3CP9, and Y3CQ0 are qualified as nondetected and estimated (U,J) due to method blank contamination (see Comment E).
- 3. Detected results for 1,4-dioxane in Y3CN2 and Y3CN4 are qualified as estimated (J) due to high DMC recoveries (see Comment F).
- 4. Detected results for 1,4-dioxane in samples Y3CN2 and Y3CN4 are qualified as estimated (J) due to concentrations exceeding calibration range (see Comment G).

# Sampling Issues

The sampler signature is missing on traffic report & chain of custody records (TR/COCs) for samples collected on 07/18/07 through 07/20/07 (see attached TR/COCs, pp. 5 through 7 in data package).

# **Additional Comments**

The SDG Narrative stated that "Sample Y3CN4 was re-analyzed due to the possibility of carryover in the first analysis." Results for Y3CN4 are reported in Table 1A since 1,4-Dioxane results for Y3CN4 (120 ug/L) and Y3CN4RE (110 ug/L) are very similar.

The laboratory performed manual integrations on calibrations and samples due to incorrect auto integration. Manual integrations were reviewed and found to be satisfactory and in compliance with proper integration techniques.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, Guidelines for Data Review of Contract Laboratory Program Analytical Services Volatile and Semivolatile Data Packages;
- USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration, SOM01.1, May 2005; and
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2005.

#### II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	<u>Acceptable</u>	Comment
1.	Holding Time/Preservation	Yes	
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	No	A, D
4.	Continuing Calibration	No	A, D
5.	Laboratory Blanks	No	E
6.	Field Blanks	Yes	
7.	Deuterated Monitoring Compounds	. No	B, F
8.	Matrix Spike/Matrix Spike Duplicates	N/A	
9.	Laboratory Control Samples/Duplicates	N/A	
10.	Internal Standards	Yes	
11.	Compound Identification	, Yes	
12.	Compound Quantitation	, No	C, G
13.	System Performance	Yes	
14.	Field Duplicate Sample Analysis	Yes	

N/A = Not Applicable

# III. VALIDITY AND COMMENTS

- A. Nondetected results for the following analyte are qualified as rejected due to very low RRFs in initial and continuing calibrations and are flagged "R" in Table 1A.
  - 1,4-Dioxane in samples Y3CN5, Y3CN6, Y3CP0 through Y3CP4, and Y3CP6 through Y3CP9 and storage blanks VHBLK32 and VHBLK32RE

RRFs below 0.01 were reported for 1,4-dioxane in initial and continuing calibrations (see Table 2). Since results are nondetected, false negatives may exist.

DMC 1,4-dioxane-d8 also had RRFs below 0.01 in initial and continuing calibrations (see Table 2).

The RRF evaluates instrument sensitivity and is used in the quantitation of target analytes.

B. The result for the following analyte is qualified as rejected due to a very low DMC recovery (<20%) and is flagged "R" in Table 1A.

{1,4-Dioxane-d8}

• 1,4-Dioxane in sample Y3CP8

A recovery of 11% was reported for the DMC 1,4-dioxane-d8 in sample Y3CP8, which is well below the QC limit of 50-150%. Since the result is nondetected, false negative may exist. Sample Y3CP8 was not reanalyzed.

Surrogates (e.g., deuterated monitoring compounds (DMCs)) are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with DMCs prior to purging. DMCs provide information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

- C. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.
  - All detected results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

- D. Detected results for the following analyte are qualified as estimated due to very low RRFs in initial and continuing calibrations and are flagged "J" in Table 1A.
  - 1,4-Dioxane in samples Y3CN2 through Y3CN4, Y3CN7 through Y3CN9, and method blanks VBLK25, VBLK26, and VBLK31

RRFs below 0.01 were reported for 1,4-dioxane in initial and continuing calibrations (see Table 2). Detected results may be biased low.

DMC 1,4-dioxane-d8 also had RRFs below 0.01 in initial and continuing calibrations (see Table 2).

- E. The following results are qualified as nondetected and estimated due to method blank contamination and are flagged "U,J" in Table 1A.
  - 1,4-Dioxane in samples Y3CN1, Y3CN5, Y3CN6, Y3CP0, Y3CP5, Y3CP9, and Y3CQ0 and storage blanks VHBLK32 and VHBLK32RE

1,4-Dioxane was found in method blanks VBLK25, VBLK26, and VBLK31 (see Table 1A for concentrations). Results for the samples listed above are considered nondetected and estimated (U,J) and quantitation limits have been raised according to blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 5 times the amount in any associated blank. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried

through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

F. Results for the following analyte are qualified as estimated due to DMC recoveries above the QC limit and are flagged "J" in Table 1A.

{1,4-Dioxane-d8}

• 1,4-Dioxane in samples Y3CN2 and Y3CN4

DMC recoveries above the QC limit are shown below.

<u>Sample</u>	<u>DMC</u>		% Recovery	<b>QC</b> Limits
Y3CN2	1,4-Dioxane-d8		157	50-150
Y3CN4	1,4-Dioxane-d8		286	50-150
Y3CP1	1,4-Dioxane-d8		153	50-150
Y3CN4RE	1,4-Dioxane-d8	•	228	50-150
VHBLK32	1,4-Dioxane-d8		155·	50-150

Qualified results may be biased high. Recoveries for DMC 1,4-dioxane-d8 in sample Y3CP1 and storage blank VHBLK32 exceeded the QC limit but associated results were not qualified because they were nondetects. The samples were not reanalyzed.

- G. Detected results for the following analyte are qualified as estimated due to concentrations exceeding calibration range and are flagged "J" in Table 1A.
  - 1,4-Dioxane in samples Y3CN2 and Y3CN4

Concentrations of 1,4-dioxane in undiluted analyses of samples Y3CN2 and Y3CN4 were 180 ug/L and 120 ug/L, respectively. These values exceed the 2.0-80 ug/L calibration range. The laboratory did not analyze samples Y3CN2 and Y3CN4 at dilutions due to insufficient volume.

Results reported in Table 1A for 1,4-dioxane in samples Y3CN2 and Y3CN4 are from the undiluted analysis. These concentrations are considered to be qualitatively acceptable but quantitatively questionable and should be considered as minimum concentrations at which 1,4-dioxane are present in the samples.

#### **ANALYTICAL RESULTS**

Case No.: 36520 SDG No.: Y3CN1 **Table 1A** 

Site: Omega Chem OU2

Lab: Shealy Environmental Services, Inc.

Reviewer: Santiago Lee, ESAT/LDC

Date: 09/14/07

QUALIFIED DATA

Concentration in ug/L

Analysis Type:

Trace Level Water Samples

Page 1 of 2

for Volatiles SIM

Station Location :	Y3CN1			Y3CN2			Y3CN3			Y3CN4	•		Y3CN5			Y3CN6		
Sample ID :	Y3CN1			Y3CN2			Y3CN3			Y3CN4			Y3CN5		FB	Y3CN6		
Collection Date:	7/18/2007			7/18/2007			7/18/2007			7/18/2007			7/18/2007			7/19/2007		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,4-Dioxane	6.2U	J	DE	180	J	DFG	23	J	D	120	J	DFG	2.0U	R	AE	2.0U	R	AE ;
i, r Dioxulio																		
1,2-Dibromoethane	0.050U	<u> </u>		0.050U	·		0.050Ú		-	0.0095L	J	С	0.050U		· •	0.050U		

Station Location :	Y3CN7			Y3CN8			Y3CN9			Y3CP0			Y3CP1			Y3CP2		
Sample ID :	Y3CN7			Y3CN8			Y3CN9			Y3CP0			Y3CP1		FB	Y3CP2		
Collection Date :	7/19/2007			7/19/2007			7/19/2007			7/19/2007			7/19/2007			7/20/2007		
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Volatiles SIM	Result	Val	Com.	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,4-Dioxane	Result 7.6	Val_	D	Result 14	J	D	Result 32	Val ا	D	Result 2.0U	<b>Val</b> R	Com AE	Result 2.0U	<b>Val</b> R	Α	Result 2.0U	R	Com A
		J	D		J			J	Com D		Val R	ΑE		Val R	Com A			A

Station Location :	Y3CP3			Y3CP4		-	Y3CP5			Y3CP6 ·			Y3CP7			Y3CP8		
Sample ID :	Y3CP3			Y3CP4	•		Y3CP5		·	Y3CP6		FB	Y3CP7			Y3CP8		
Collection Date :	7/20/2007			7/20/2007			7/20/2007			7/20/2007			7/23/2007			7/23/2007		
Dilution Factor :	1.0		_	1.0		_	1.0			1.0			1.0			1.0	_	
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,4-Dioxane	2.0U	R	Α	2.0U	R	Α	3.0U	J	DE	2.0U	R	Α	2.0U	R	Α	2.0U	R	AB
1,2-Dibromoethane	0.050U			0.050U	1 - 1		_0:050∪	1 T T		0.050U			0.050U			0.050U	C.13	
1,2-Dibromo-3-chloropropane	0.050U		I	0.050U		[ <u> </u>	0.050U			0.050U			0.050U			0.050U		

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Limit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

#### Page 2 of 2

**ANALYTICAL RESULTS** 

Case No.: 36520

SDG No.: Y3CN1

Table 1A

Site: Omega Chem OU2

Lab: Shealy Environmental Services, Inc.

Reviewer: Santiago Lee, ESAT/LDC

Date: 09/14/07

QUALIFIED DATA Concentration in ug/L

Analysis Type :

Trace Level Water Samples

for Volatiles SIM

Station Location:	Y3CP9			Y3CQ0			Method Bla	ank		Method Bla	ınk	_	Method Bla	ank		Storage Bl	ank	
Sample ID :	Y3CP9		D1	Y3CQ0		D1	VBLK25			VBLK26			VBLK31			VHBLK32		
Collection Date :	7/23/2007			7/23/2007						l								
Dilution Factor :	1.0			1.0			1.0			1.0			1.0			1.0		
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,4-Dioxane	2.0U	R	ΑE	2.9U	J	ÐΕ	1.3L	J	CD	0.79L	J	CD	1.2L	J	CD	2.0U	R	ΑÉ
1,2-Dibromoethane 1,2-Dibromo-3-chloropropane	0.050U 0.050U			0.050U 0.050U			0.050U 0.050U	134 1		0.050U 0.050U	المساد المالية	د مسدد المنداد	0.050U 0.050U	100		0.050U 0.050U		

Station Location:	Storage Bl	ank							-									
Sample ID :	VHBLK32F	RE		CRQL			Ĭ						Į .			Į		ļ
Collection Date :																		
Dilution Factor :	1.0																	
Volatiles SIM	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,4-Dioxane	2.0U	R	AE	2.0														
1,2-Dibromoethane	0.050U			0.050														
1,2-Dibromo-3-chloropropane	0.050U			0.050				27.7.2.2.2							VIII 222			

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Limit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

#### **TABLE 1B**

## DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," January 2005.

- U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

# Table 2 Calibration Summary

Case No.: 36520 SDG No.: Y3CN1

Site: Omega Chem OU2
Laboratory: Shealy Environmental Services, Inc.
Reviewer: Santiago Lee, ESAT/LDC

September 14, 2007 Date:

# RELATIVE RESPONSE FACTORS

	RRF	RRF	<u>RRF</u>	<u>RRF</u>	RRF
Analysis date:	07/24/07	07/25/07	07/26/07	07/26/07	07/26/07
Analysis time:	17:25-	13:36	00:36	06:57	1.7:14
GC/MS I.D.:	MSD8	MSD8	MSD8	MSD8	MSD8
Analyte	<u>Init.</u>	Cont.	Cont.	Cont.	Cont.
1,4-Dioxane	0.0013	0.0015	0.0018	0.0018	0.0024
1,4-Dioxane-d8	0.0013	0.0015	0.0018	0.0015	0.0021
					•
	<u>RRF</u>	<u>RRF</u>			
Analysis date:	07/31/07	07/31/07			
Analysis time:	09:00	11:34			

GC/MS I.D.: MSD8 MSD8 Analyte Cont. Cont. 1,4-Dioxane 0.0021 0.0013 1,4-Dioxane-d8 0.0012 0.0020

4	R # 202
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# **USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record**

DAS No:

SDG No:

						1		
Date Shipped: Carrier Name:	7/18/2007	Chain of Custody Rec	ord	Sampler Signature:		For Lab Use On	•	
	FedEx	Relinquished By	(Date / Time)	Received By	(Date / Time)	Lab Contract No:	EPW 05031	
Airbill:	799177129103, 7923802365	1 2 4 7	1111			1		
Shipped to:	Shealy Environmental	1/1/2/	7-18-01-1900			Unit Price:		
٠	106 Vantage Point Drive Cayce SC 29033				ļ 	Transfer To:		
	(803) 791-9700	3				Lab Contract No:		
	ç	4		(2	119/07-0920	Unit Price:		

ORGANIC \$AMPLE No.	,	CONC	ANALYSIS/ TURNAROUND	TAG No.1 PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COL DATE/TIM		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
Y3CN0	Ground Water/ Robert Hernandez	L/G ·	SIM TVOA (21), SVOA (21)	255 (Ice Only), 256 (Ice Only), 257 (Ice Only), 258 (Ice Only), 259 (HCL), 260 (HCL), 261 (HCL), 262 (HCL), 263 (HCL), 264 (HCL), 265 (HCL), 266	Y3CN0	S: 7/18/2007	8:25		6,K
Y3CN1	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	(HCL) (12) 267 (Ice Only), 268 (Ice Only), 269 (HCL), 270 (HCL), 271 (HCL), 272 (HCL) (6)	Y3CN1	S: 7/18/2007	9:15		
Y3CN2	Ground Water/ Robert Hernandez	ÙG	SIM TVOA (21), SVOA (21)	273 (Ice Only), 274 (Ice Only), 275 (HCL), 276 (HCL), 277 (HCL), 278 (HCL) (6)	Y3CN2	S: 7/18/2007	10:10	·	
Y3CN3	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	279 (Ice Only), 280 (Ice Only), 281 (HCL), 282 (HCL), 283 (HCL), 284 (HCL) (6)	Y3CN3	S: 7/18/2007	11:15		
Y3CN4	Ground Water/ Robert Hernandez	M/G	SIM TVOA (21), SVOA (21)	285 (Ice.Only), 286 (Ice Only), 287 (HCL), 288 (HCL), 289 (HCL), 290 (HCL) (6)	Y3CN4	S: 7/18/2007	12:12		
Y3CN5	Ground Water/ Robert Hernandez	ΓG	SIM TVOA (21)	291 (HCL), 292 (HCL), 293 (HCL), 294 (HCL) (4)	Y3CN5	S: 7/18/2007	13:00		COPY
							ORI	-Juil	rs included in csf 7301 Manannyhe Signature 2307 Date

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):		Cooler Temperature Upon Receipt  5.3, 4.6	Chain of Custody Seal Nur	nber:	
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Gra	o ≠ G		Custody Seal Intact?	Shipment Iced?	$\Sigma$
SIM TVOA = CLP TCL	Volatiles (including SIM), SVOA = 1,4-Dioxane				7	· · · · · · · · · · · · · · · · · · ·	

TR Number: 9-373659945-071807-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 2000 Edmund Hailey Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

LABORATORY COPY

F2V5.1. 043 Page 1 of 1

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# **USEPA Contract Laboratory Program** Organic Traffic Report & Chain of Custody Record

ase No:	365
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DAS No:

YBENI SDG No:

Date Shipped:	7/19/2007	Chain of Custody Re	cord	Sampler Signature:		For Lab Use On	- · · · · · · · · · · · · · · · · · · ·
Carrier Name:	FedEx	Relinquished By	(Date / Time)	Received By	(Date / Time)	Lab Contract No:	LPW05031
Airbiii:	790294947320, 7991779248	1 1/2-1	1400			]	
Shipped to:	Shealy Environmental	10 16	7400	<del> </del>		Unit Price:	
	106 Vantage Point Drive Cavce SC 29033	2				Transfer To:	
	(803) 791-9700	3				Lab Contract No:	
•		4		1//1 7	hala 1920	] '	

					VVV-1-0				
ORGANIC SAMPLE No.	MATRIX SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLEC DATE/TIME	т	INORGANIC . SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
Y3CN6	Ground Water/ Robert/Hernandez	L/G	SIM TVOA (21), SVOA (21)	297 (Ice Only), 298 (Ice Only), 299 (HCL), 300 (HCL), 301 (HCL), 302 (HCL) (6)	Y3CN6	S: 7/19/2007	8:30 .		OK
Y3CN7	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	303 (Ice Only), 304 (Ice Only), 305 (HCL), 306 (HCL), 307 (HCL), 308 (HCL) (6)	Y3CN7	S: 7/19/2007	9:25		
Y3CN8	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	309 (Ice Ónly), 310 (Ice Only), 311 (HCL), 312 (HCL), 313 (HCL), 314 (HCL) (6)	Y3CN8	S: 7/19/2007	9:55		
Y3CN9	Ground Water/ Robert Hernandez	M/G	SIM TVOA (21), SVOA (21)	315 (Ice Only), 316 (Ice Only), 317 (HCL), 318 (HCL), 319 (HCL), 320 (HCL) (6)	Y3CN9	S: 7/19/2007	11:07		
Y3CP0	Ground Water/ Robert Hernandez	M/G	SIM TVOA (21), SVOA (21)	321 (Ice Only), 322 (Ice Only), 323 (HCL), 324 (HCL), 325 (HCL), 326 (HCL) (6)	Y3CP0	S: 7/19/2007	12:45	·	·
Y3CP1	Ground Water/ Robert Hernandez	√G	SIM TVOA (21)	327 (HCL), 328 (HCL), 329 (HCL), 330 (HCL) (4)	Y3CP1	S: 7/19/2007	13:00		$\mathcal{T}_{1}$

	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature	Chain of Custody Seal Number:
Complete?N	,		Upon Receipt 4.4	. NA
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = 0	g - 8 , 7 ,	Custody Seal Intact? Shipment iced?
SIM TVOA = CLP TCL \	/olatiles (including SIM), SVOA = 1,4-Dioxane			7

LABORATORY CO

F2V5.1.043 Page 1 of 1

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# USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

ase	No:	36520

DAS	No:	

SDG No: Vapul

L

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Date Shipped: Carrier Name:	7/20/2007	Chain of Custody F	Record	Sampler Signature:			For Lab Use On	· 9
	FedEx	Relinquished By	(Date / Time)	Received By		(Date / Time)	Lab Contract No:	EPW03031
Alrbill:	791726191401	1/1/20	57-10-07 1200	- <del></del>			1.	SW 07/26/01
Shipped to:	Shealy Environmental	125	3700-1 100	<u> </u>		<del> </del>	Unit Price;	
	106 Vantage Point Drive Cayce SC 29033	2/ 6/			Δ		Transfer To:	_
	(803) 791-9700	3		11/4/	()	1	Lab Contract No:	c
ļ		<u> </u>		+11-1/1	1/ 2/2	10 10	1	

						1104	101110	Unit Pric	e:	
ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	7	SAMPLECOL DATE/TIM		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
Y3CP2	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	331 (Ice Only), 332 (Ice Only), 333 (HCL), 334 (HCL), 335 (HCL), 336 (HCL) (6)	Y3CP2		S: 7/20/2007	7:25		ok
Y3CP3	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	337 (Ice Only), 338 (Ice Only), 339 (HCL), 340 (HCL), 341 (HCL), 342 (HCL) (6)	Y3CP3		s: 7/20/2007	8:17		
Y3CP4	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21), SVOA (21)	343 (Ice Only), 344 (Ice Only), 345 (HCL), 346 (HCL), <sup>2</sup> 347 (HCL), 348 (HCL) (6)	Y3CP4	\$	5: 7/20/2007	9:05		
Y3CP5	Ground Water/ Robert Hernandez	ĽG	SIM TVOA (21), SVOA (21)	349 (lice Only), 350 (lice Only), 351 (HCL), 352 (HCL), 353 (HCL), 354 (HCL) (6)	Y3CP5	;	s: 7/20/2007	10:20		
Y3CP6	Ground Water/ Robert Hernandez	L/G	SIM TVOA (21)	361 (HCL), 362 (HCL), 363 (HCL), 364 (HCL) (4)	Y3CP6	:	s: 7/20/2007	11:00		

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	'Additional Sampler Signature(s):	Cooler Temperature Upon Receipt 4.	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab =	G	Custody Seal Intact? Y Shipment Iced?
SIM TVOA = CLP T	CL Volatiles (including SIM), SVOA = 1,4-Dioxane			

TR Number:

9-373659945-072007-0001

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